Claims

1. A process of producing an ethylenically unsaturated amide, wherein a nitrile is treated with an enzyme which is a nitrile hydratase in an aqueous medium, characterised in that
the nitrile hydratase is obtainable from a microorganism of the Dietzia genus.

2. A process of producing an ammonium salt of an ethylenically unsaturated carboxylic acid, wherein an amide is treated with an enzyme which is an amidase in an aqueous medium, characterised in that
the amidase is obtainable from a microorganism of the Dietzia genus.

3. A process according to claim 1 in which the ethylenically unsaturated nitrile is (meth) acrylonitrile.

4. A process according to any of claims 1 to 3 in which the ethylenically unsaturated amide is (meth) acrylamide.

5. A process according to any of claims 2 to 4 in which the ethylenically unsaturated carboxylic acid is (meth) acrylic acid.

6. A process according to any of claims 1 to 5 in which the enzyme is comprised within whole cells of the microorganism.

7. A process according to any of claims 1 to 8 in which the microorganism is a species of Dietzia selected from the group consisting of Dietzia spp., Dietzia natronolimnaios, Dietzia maris and Dietzia psychralcaliphila.

8. A process according to any of claims 1 to 7 in which the microorganism is Dietzia natronolimnaios strain NCIMB 41165.

9. Dietzia natronolimnaios strain NCIMB 41165.

10. Nitrile hydratase enzyme obtainable by culturing Dietzia natronolimnaios strain NCIMB 41165.

11. Amidase enzyme obtainable by culturing Dietzia natronolimnaios strain NCIMB 41165.